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10/689,280	10/20/2003	Mark Beaumont	DB001065-000	2930

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JONES DAY
500 GRANT STREET
SUITE 3100
PITTSBURGH, PA 15219-2502

EXAMINER	
WILSER, MICHAEL P	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/689,280	BEAUMONT, MARK	
	Examiner	Art Unit	
	Michael Wilser	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2 filed on 10/20/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-15 are pending n this application.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "44" has been used to designate both DRAM interface in the specification pag8, paragraph 39, line 1 and condition logic in Figure 2.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 30 on page 7, paragraph 37, line 2, 32 on page 7, paragraph 38, line 3, 34 on page 7, paragraph 38, line 3, and 38 on page 7, paragraph 38, line 3.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 37 in Figure 2, 47 in Figure 2, 48 in Figure 2, 50 in Figure 2, and 52 in Figure 2.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The disclosure is objected to because of the following informalities: the examiner notes the use of acronyms (e.g. MMX) throughout the specification without first including a description in plain text, as required.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following claim language is vague or indefinite.

(i) As per Claims 1-2, 6-7, 9, and 15, it is uncertain as to what is included in n, z, A, and B and how the relationship is among them (i.e. integer number, positive number, bigger, less than, etc.).

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-15 are rejected for being directed towards a method and memory device but claim a mathematical function and not producing any useful or tangible result. Mathematical functions are considered non-statutory subject matter by the office and therefore Claims 1-15 are directed at non-statutory subject matter.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poeppelman (US 6,617,985) in view of Cornelius et al. (US 6,363,152) and Stephen (US 6,329,935).

14. As per Claim 1, Poeppelman teaches the invention substantially as claimed including a method of generating an interleave pattern for n lots of A and lots of B (column 4, lines 7-22) comprising:

generating an interleave pattern in which all less than n are replaced by A and all other values are replaced by B (column 4, lines 32-36).

15. However, Poeppelman does not explicitly disclose of replacing the values of n in correspondence to a key. However, Cornelius discloses a method in which the values are replaced corresponding to a key (column 3, lines 48-57).

16. It would have been obvious to one of ordinary skill in the art at the time of invention to have used the key in Cornelius's invention as the key in Poeppelman's invention. One would have been motivated to use a key to replace the values of n so that it was known as to what values of n were to be replaced with A and which ones should be replaced by B as Poeppelman already states which values he considers to be A and which he considers to be B (column 4, lines 32-36).

17. However, Poeppelman does not explicitly disclose of creating a key comprised of the reverse bit order of a serially indexed count from 0 to 2z. However, Stephen discloses a method in which a key is created comprising the reverse bit order of a serially indexed count from 0 to 2z (column 3, lines 52-61).

18. It would have been obvious to one of ordinary skill in the art at the time of invention to have used the indexed count in Stephen's invention for producing the key in Poeppelman's invention. One would have been motivated to use a serially reversed key since it is one of the many ways of creating an interleave pattern which is common in the computing arts.

19. As per Claim 2, Poeppelman teaches the invention substantially as claimed including a method generating an interleave pattern for lots of A and lots of B (column 4, lines 7-22) comprising:

a. selecting a portion of a list (column 3, lines 8-10);

b. renumbering the selected portion of the list to form a key (column 3, lines 18-36); and

c. generating an interleave pattern in which all values less than n are replaced by A and all other values are replaced by B (column 4, lines 32-36).

And, Cornelius discloses generating an interleave pattern in correspondence to a key (column 3,lines 48-57).

And, Stephen discloses creating a list in which the entries are comprised of the reverse bit order of a serially indexed count from 0 to 2z (column 3, lines 52-61).

20. As per Claim 3, Poeppelman further discloses selecting a centered portion (column 3, lines 8-25).

21. As per Claim 4, Poeppleman further discloses dropping entries alternatively from each side of the list (column 3, lines 8-12).

22. As per Claim 5, Stephen further discloses renumbering in order of ascending value (column 3, lines 35-45).

23. As per Claim 6, Poeppelman teaches the invention substantially as claimed including a method comprising:

a. creating a table of interleave patterns for all values of lots of A and lots of B (column 3, lines 30-36); and

b. storing the table (column 3, lines 40-45).

And, Cornelius discloses of interleave patterns based on a key (column 3, lines 48-57).

And, Stephen discloses of creating a key comprised of the reverse bit order of a serially indexed count from 0 to 2z (column 3, lines 52-61).

24. As per Claim 7, Poeppelman further discloses automatically selecting an interleave pattern from the table based on one of the values of n (column 5, lines 25-40).

25. As per Claim 8, Poeppelman further discloses generating an interleave pattern based on the selecting (column 4,lines 32-36).

26. As per Claim 9, Poeppelman teaches the invention substantially as claimed including a method comprising:

a. selecting a portion of a list (column 3, lines 8-10);

b. renumbering the selected portion of the list to form a key (column 3, lines 18-36);

c. creating a table of interleave patterns for all values of lots of A and lots of B (column 3, lines 30-36); and

d. storing the table (column 3, lines 40-45).

And, Cornelius discloses of interleave patterns based on a key (column 3, lines 48-57).

And, Stephen discloses:

a. selecting a value which is greater than the value of n lots of A plus y lots of B, but less than twice the value (column 3, lines 52-61); and

b. creating a list in which the entries are comprised of the reverse bit order of a serially indexed count from 0 to 2z (column 3, lines 52-61).

27. As per Claims 10-12, they are rejected for the same reason as Claims 3-5 above.

28. As per Claims 13-14, they are rejected for the same reason as Claims 7-8 above.

29. As per Claim 15, it is rejected for the same reason as Claim 1 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wilser whose telephone number is (571) 270-1689. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST (Alt Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPW
November 26, 2007

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100